

Obesity in Rabbits

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Millie, an obese rabbit case

Health risks associated with obesity:

Urine scalding

Disorders of the urinary tract are relatively common in rabbits. Urine scalding of the skin around the genitals and anus and underside of the abdomen and inside legs is a common sign of problems with the urinary tract. Obesity is a common factor in this condition.

Obese rabbits are unable to direct the urine into their latrine area without folds of skin and fat causing obstruction resulting in urine being sprayed onto the skin around the genital area. As a consequence the urine will burn the skin and bacterial infection can follow. This is a painful condition.



Millie, urine scalding over her underside and tail, caused by her obesity

Cystitis

Obese rabbits can have difficulty emptying their bladder fully. The residual urine contains calcium crystals which precipitate to form bladder stones. The stones rub against the bladder wall and cause cystitis.

Faecal scalding

This is also known as "sticky bottom syndrome". This is a common problem where the rabbits cannot or do not eat their caecotrophs (night faeces). Caecotrophs are an important source of vital nutrients (proteins, volatile fatty acids, vitamins B and K).

A diet high in carbohydrates or protein (human food eg biscuits, commercial rabbit food) and low in fibre (eg. hay and grass) causes the caecum to produce excessive amounts of caecotrophs which the rabbit cannot ingest. Obese rabbits often have this diet.

Complicating factors including rolls of fat which cover the anus when the rabbit arches over to ingest caecotrophs from the anus. Rabbits are very clean animals and will not ingest caecotrophs that are stuck to their fur or on their bedding. Caecotrophs stuck to their fur cause skin infections and discomfort. Dry faeces mats can prevent the rabbit from being able to pass any more faeces.

Fly strike

The ammonia from urine, the odour of faeces and damaged tissue will all attract flies, bluebottles (*Calliphora*) and greenbottles (*Lucilia*). The flies lay their eggs on the rabbit which later hatch into maggots. Some of the maggots will then feed on live and dead tissue of the rabbit.

The most common site for this is usually in the area around the rabbit's tail and anogenital region.

This is a difficult area for rabbits to groom effectively, especially if they are obese.

Sore hocks

This condition is also known as pododermatitis or pressure sores. These sores can be mild involving hair loss and swelling of the weight bearing areas of the back feet and sometimes the front feet.

Rabbits have thick guard hairs covering the sole areas of their feet, they do not have foot pads like cats and dogs. If their body weight increases due to obesity increased pressure will be transmitted through their leg bones to their feet. This will wear

Obesity is one of the most common conditions seen in rabbits; one in four rabbits seen at the Rabbit Clinic, Exotic Animal and Wildlife Service, Royal (Dick) School of Veterinary Studies, University of Edinburgh, are obese.

Obesity has significant implications for the individual's health, increasing the risk of urine and faecal scalding, cystitis, fly strike, sore hocks, arthritis, fatty liver disease and high cholesterol, high blood pressure and heart disease.

Complications for parturition (giving birth), anaesthetics and surgery are also associated with obesity in rabbits.

down the fur. The skin then becomes swollen and red. Bacterial infection can occur if the skin breaks.

This infection can become very severe and invade the bones of the feet. This is a very painful and sadly common condition. Obesity is one of the main causes for this condition.

Arthritis

Arthritis is inflammation of the joints. Obese rabbits are prone to getting arthritis and will also exacerbate the problem if they already have the condition. The increased body weight will put increased pressure on all the joints involved in supporting the rabbit. Arthritis is commonly seen in the elbows, knees and hocks (ankles).

Fatty liver disease

Obese rabbits have been shown to have high cholesterol. Excessive fat will also be stored in the liver. This makes the liver more fragile and it cannot break down toxins and medications as well as it should. This results in fatty liver disease which can be fatal.

Heart problems

Obese rabbits have high resting heart rates, high blood pressure and have been shown to develop heart disease as a consequence of their obesity.

Skin disease

Obese rabbits are unable to groom inaccessible parts such as the base of the tail and nape of their neck. Soiled fur will lead to skin infections and mite infestations such as *Cheyletiella parasitovorax*.

This mite lives in small numbers on the skin and does not cause a problem. If the rabbit can't groom regularly the mites will multiply and will then cause skin irritation, dandruff, hair loss and itchiness.



Brigitte Reusch weighing a rabbit at the Rabbit Clinic.

Rabbits fed on a mainly hay diet (at least 70-80% of their diet), with limited commercial rabbit food, maximum one to two tablespoons per rabbit per day and a handful of leafy vegetables and weeds morning and evening should avoid all of the health risks associated with obesity.

Small amounts of herbs are a tasty and healthy treat for your rabbit.

Regular checking of the body condition of the rabbit, by feeling over his or her ribs will help to check if further diet adjustments are needed. In good body condition the ribs are easily felt,

however when in obese condition the ribs will be hard to feel.

Most vets will be happy to check the condition and weight of your rabbit free of charge. This is also available free of charge at the Rabbit Clinic, Royal (Dick) Vet School, Edinburgh (www.rabbitclinic.com).

